SNS Controls Group Informal Lunch Meeting January 11, 2001

ATTENDEES

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PRESENTATION

How to Develop an EPICS application in SNS EPICS ADE at BNL - J. Tang

The proposed Application Development Environment (ADE) is based on a model developed for the Advanced Photon Source (APS) at Argonne National Laboratory. Its main objectives are:

- Minimize the overhead of integrating software developed by collaborators at multiple sites
- Minimize the impact of EPICS upgrades
- Facilitate testing of applications against a known version of the running system without impacting operations
- Support configurable software development

To meet these objectives, a centralized software repository based on the Concurrent Versions System (CVS) version control system will be maintained at Oak Ridge. All collaboration sites will store their software components in the repository using standard access procedures. Separate standardized "development" and "operation" directory structures will be established across the entire collaboration. Configuration databases will be integrated with the ADE using standardized build procedures.
References:

1. ADE for SNS - EPICS meeting talk 99 at SLAC.ppt
2. SNS EPICS ADE User's guide - 2.0.doc

DISCUSSION

How to integrate the configuration database with the ADE?

A scheme proposed by Kay Kasemir at Los Alamos to generate an EPICS database from an Oracle RDB was reviewed. The main idea is to "Store EPICS record information in an RDB". Access would be through standardized Perl scripts and a Java based WWW interface.
References:

1. `http://lansce.lanl.gov/lansce8/epics/PC/epics_rdb/default.htm`

Following some discussion, it was concluded that a scheme combining the use of a configuration database with other tools such as Capfast would be preferable to the

"RDB only" approach. The main benefit of this scheme is that it uses the best features of each tool. Figure 1 shows one such scheme. It consists of two main procedures:

- **Procedure T1** combines information from a Capfast schematic (*.sch) file with hardware and configuration information from an Oracle database to generate an EPICS database (*.db) file to be loaded in the IOC.
- **Procedure T2** uses information from the EPICS database file to generate a complete read-only Oracle version of the database that can be used for queries.

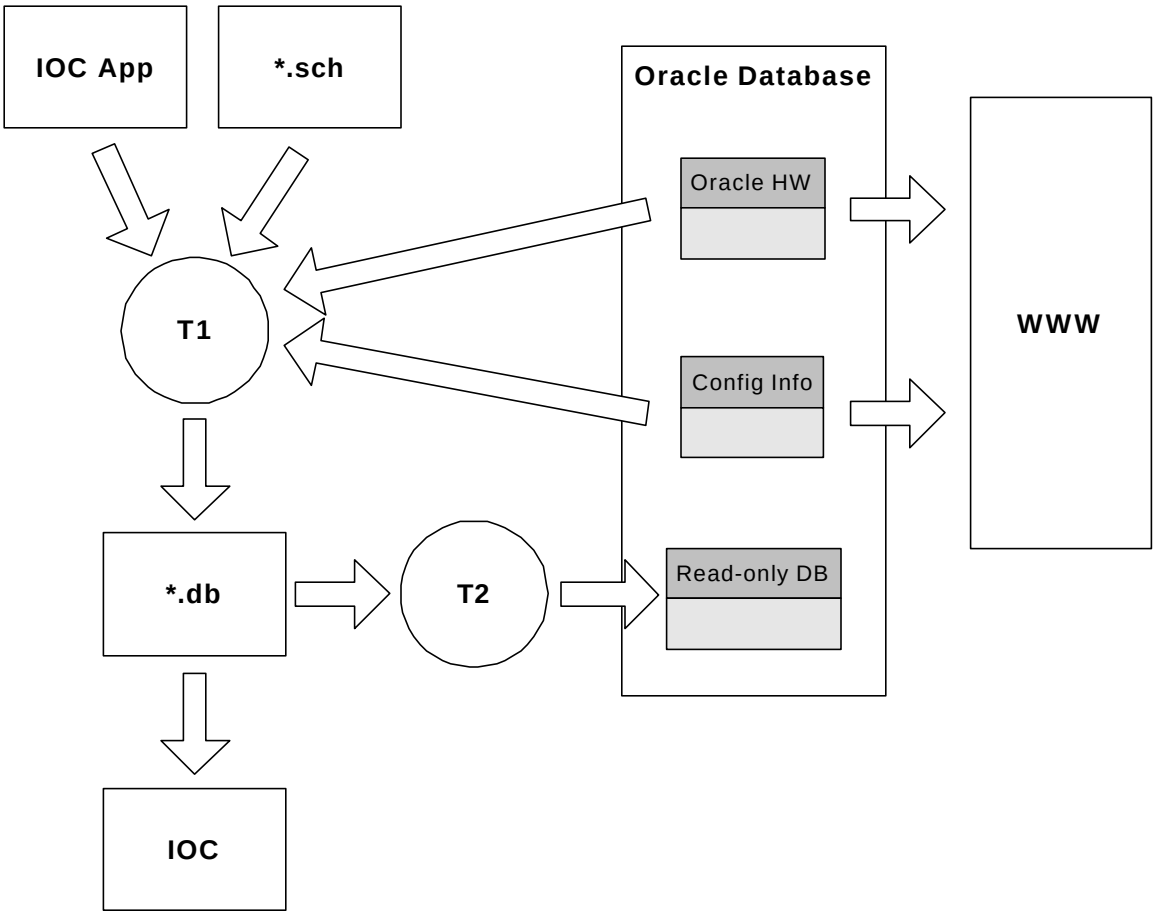

Figure 1. Combined scheme for building IOC EPICS database from multiple sources.